

REMARKS

Claims 6-14 are pending in the application. Claims 1-5 have been canceled without prejudice or disclaimer. New claims 6-14 have been added. No new matter has been added. Reconsideration of the claims is respectfully requested.

Claims 6-14 have been added to more clearly claim the invention. These claims were not added for reasons of patentability, and it is believed that at least independent claims 6 and 10 are not narrower than canceled independent claims 1 and 4.

Rejection under 35 U.S.C. § 112

Claims 1-5 were rejected under 35 U.S.C. § 112 second paragraph for being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, it was stated that the claims were incomplete for omitting essential steps, the essential steps being listed as how the voltages across the different laser sections are determined. This rejection is moot in view of the amendments. Applicants believe that claims 6-14 comply with 35 U.S.C. § 112, second paragraph.

Applicants do not agree, however, that essential steps were missing from the claim. The Examiner requested more detail regarding a step already in the claim. This is not an essential missing step, but is detail to an existing step. Furthermore, one of ordinary skill in the art would understand how to determine the voltage across a laser section when the laser was operating, and how to maintain a voltage level to be constant, and so the additional detail requested in the Office Action was not required for the claims to comply with 35 U.S.C. § 112.

Rejection under 35 U.S.C. § 102

Claims 1-5 are rejected under 35 U.S.C. § 102 (e) as being anticipated by Shin (U.S. Patent 5,872,479). Shin describes an apparatus for regulating substrate voltage in a semiconductor device having a substrate voltage regulator for controlling generation of a substrate voltage so as to supply a preset-substrate voltage to a substrate. This rejection is moot in view of the cancellation of claims 1-5 and the addition of new claims 6-12. This piece of art is, however, considered in view of the new set of claims.

New independent claim 6 is directed to a method of controlling a tuneable laser having different laser sections. The laser has been characterized with respect to one or more laser operation points, each of the operation points corresponding to a set of different control conditions for the different laser sections. The method comprises determining respective voltages across the different laser sections when operating the tuneable laser. The method also comprises holding the determined respective voltages across the different laser sections at constant levels when operating the tuneable laser so as to maintain a desired laser operation point.

New independent claim 10 is directed to an arrangement for controlling a tuneable laser having different laser sections. The tuneable laser has been characterized with respect to at least one suitable laser operation point. The at least one laser operation point corresponds to a respective set of predetermined voltages applied respectively to the different laser sections. The controlling arrangement comprises the tuneable laser having different laser sections. The arrangement also includes a voltage unit coupled to the tuneable laser to apply different voltages to the different laser sections respectively. The voltage unit is adapted to hold the applied voltages at constant levels corresponding to the set of predetermined voltages associated with a desired laser operation point, so as to maintain operation of the tuneable laser at the desired laser operation point.

To anticipate a claim, the reference must teach every element of the claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Therefore, all claim elements, and their limitations, must be found in the prior art reference to maintain a rejection based on 35 U.S.C. §102. Applicants respectfully submit that Shin does not teach every element of claims 6 and 10, and therefore fails to anticipate claims 6 and 10.

Shin is deficient in several respects. The present invention is directed to the control of a tuneable laser having different laser sections. Shin fails to mention a laser. Instead, Shin merely refers to a semiconductor device. While a semiconductor laser may be considered to be a semiconductor device, Shin must teach a tunable laser

having different laser sections to be a good reference. Shin does not do so. Shin also fails to teach that the laser is characterized with respect to one or more laser operation points, where each operation point corresponds to a set of different control conditions.

With respect to claim 6 in particular, Shin fails to teach determining respective voltages across different sections of a tuneable laser, and fails to teach holding the voltages across the sections of a laser at constant levels so as to maintain a desired operation point. With respect to claim 10 in particular, Shin fails to teach a tuneable laser having different laser sections, and fails to teach that a voltage unit maintains voltages applied to the different laser sections at levels corresponding to predetermined voltages associated with a desired operation point.

Shin, in contrast to the claimed invention, teaches a circuit for applying a voltage to a substrate. In particular, Shin's device is used to regulate a substrate voltage in a semiconductor device capable of obtaining an accurate circuit operation in a manner that a substrate voltage is maintained constant regardless of an unstable variation in a power supply voltage applied from an external source, so as to prevent a threshold voltage variation and an operation point variation in the device (col. 3, lines 32-40).

Shin's device is directed to the application of a voltage to the substrate of the device. This has nothing to do with controlling a tunable laser a desired operating point by applying voltages to different sections of the laser.

Accordingly, Shin fails to teach all the elements of the inventions of claims 6 and 10, and these claims are allowable.

Dependent claims 7-9 and 11-14 further describe the invention of claims 6 and 10, and are believed also to be allowable.

In view of the amendments and reasons provided above, it is believed that all pending claims are in condition for allowance. Applicant respectfully requests favorable reconsideration and early allowance of all pending claims.

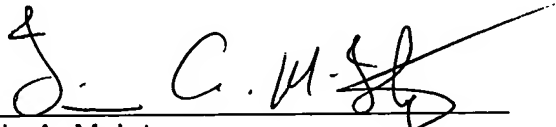
If a telephone conference would be helpful in resolving any issues concerning this communication, please contact the below-signed attorney at 952-253-4110.

Respectfully submitted,

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